Cardinal® DETECTO

DIGITAL PHYSICIAN
Waist-High Scale
Model 8430 Series
Operating Instructions

ISO REGISTERED 9001

8525-M041-O1 Rev K
10/12

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DIGITAL PHYSICIAN WAIST-HIGH SCALE

Thank you for purchasing our Detecto Model 8430 Series Digital Physician Waist-High Scale. It has been manufactured with quality and reliability at our factory in Webb City, MO USA. Your scale has been tested before leaving our factory to insure accuracy and dependability for years to come.

This manual is provided to guide you through the operation of your scale. Please read it thoroughly before attempting to operate your scale and keep it handy for future reference.

FCC COMPLIANCE STATEMENT

WARNING! This equipment generates uses and can radiate radio frequency and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user will be responsible to take whatever measures necessary to correct the interference.

> You may find the booklet "How to Identify and Resolve Radio TV Interference Problems" prepared by the Federal Communications Commission helpful. It is available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 001-000-00315-4.

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SPECIFICATIONS

Capacity	550 lb x .2 lb (250 kg x .1 kg), selectable
Platform Size	10.5” x 14.5” (267 mm x 368 mm)
Shipping Weight	34 lb (15.4 kg)
Scale Height	37.5” (953 mm)
Height Rod Measures	8430/8430S, 8431/8431S - 30” to 78” (76 cm to 200 cm) x inch/cm 8430M, 8431M - 30” to 78” (76 cm to 200 cm) by 1/4”/1mm
Display	0.7” (17.8 mm) high-contrast LCD
Power	6 “C” cell Alkaline, Ni-Cad or NiMH batteries (*not included*) *OR* an optional 115 VAC 50/60Hz 12 VDC 300 mA wall plug-in UL/CSA listed AC power adapter, Cardinal part number 728R121. Also available, for 230 VAC operation, Cardinal part number 728R901.
Keyboard	Membrane type with 19 keys, On/Off, Lock/Release, Units, Zero, Net/Gross, Tare ID/Height, Print/Enter and 0-9 Numeric Keys

Serial Number_____

Date of Purchase _____

Purchased Form_____

_____

_____

RETAIN THIS INFORMATION FOR FUTURE USE

PRECAUTIONS

Before using this instrument, read this manual and pay special attention to all "WARNING" symbols:

IMPORTANT

ELECTRICAL WARNING

UNPACKING INSTRUCTIONS

- Remove scale from carton by lifting up with equal force from column and platform base.
- Check for any damage incurred in shipping. If scale has been damaged, place a claim with the carrier. Use the original carton and shipping material to return the scale.
- Remove all plastic wrapping, foam fillers and cardboard material from the scale.
- Remove and unpack the AC power adapter.
- Carton contents:

    1) Column
    2) Indicator
    3) Platform base
    4) Screws and lock washers
    5) Height measuring rod

NOTE! If column bracket is bent, straighten before assembling.

ASSEMBLY INSTRUCTIONS

Refer to Figures No. 1, 2, 3, and 4, then follow the instructions for scale assembly.

1. Carefully remove load cell and draft rod assembly from column.

   IMPORTANT! Handle load cell assembly with care! Do not drop, bend or twist.

2. Slip column over column bracket on platform base. Screw column to column brackets (two 1/4 truss head screws in front of column and four in the back). See Figure No. 1.

3. Referring to Figure No. 2, remove both #10-32 Truss Head Screws and lock washers securing the indicator bracket to the column.

4. Lower load cell and draft rod assembly into column. Draft Rod must pass through opening in column bracket. Referring to Figure No 1, make sure open end of lower draft rod hook is facing forward toward platform.

5. Next, referring to Figure No. 3, fasten top hook bolt of load cell assembly (C) to column. Make sure the load cell assembly does not touch the sides of column.

6. Slide grommet away from load cell assembly and slide into slot on column. **NOTE!** The slot should be on back (wide side) of column.

7. Pull excess load cell cable in column leaving enough slack in cable so as not to have any side pull on load cell.

8. Place digital indicator bracket on column and attach with 2 (#10-32) truss head screws and lock washers removed in step 3. See Figure No. 2.

9. Using a desk or table, lay down scale with column horizontal to floor. Raise draft rod keeping out of lever's way. Push lever. When lever is in position, hook draft rod around pivot. See Figure No. 4.

10. Attach indicator to indicator bracket on column, then connect load cell cable to back of indicator. Refer to the 758C Owner’s Manual, 8555-M210-O1 for additional information.

11. Scale is now ready for operation.

ASSEMBLY INSTRUCTIONS, CONT.

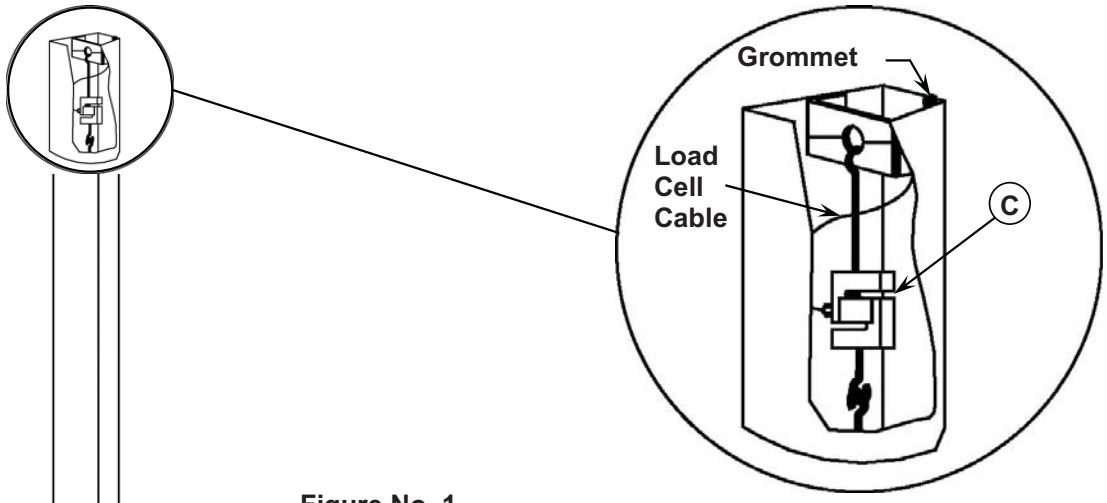
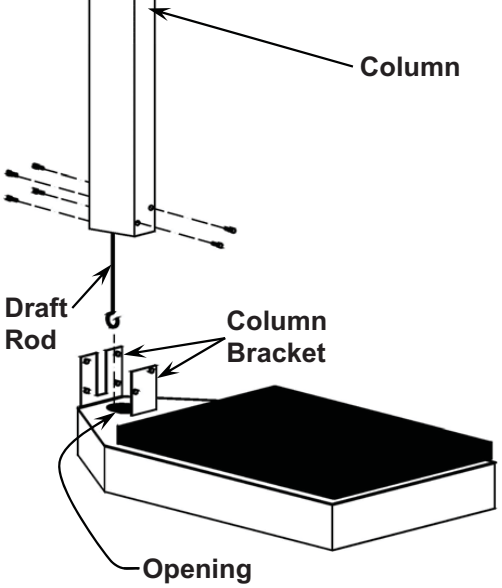


Figure No. 3

Figure No. 1



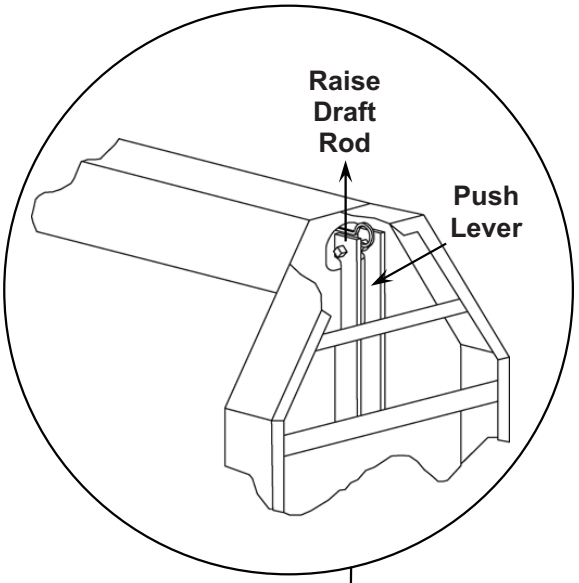


Figure No. 4

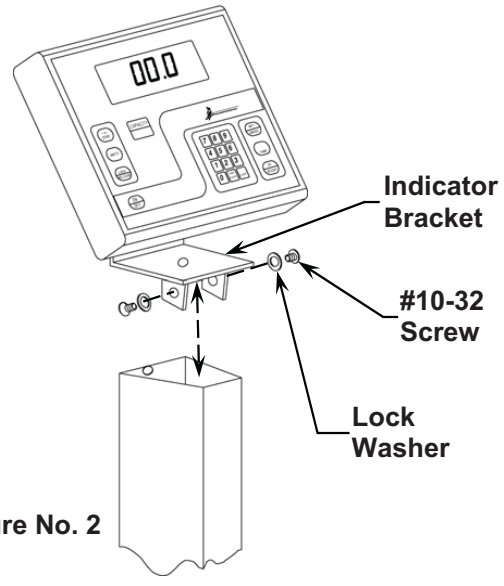
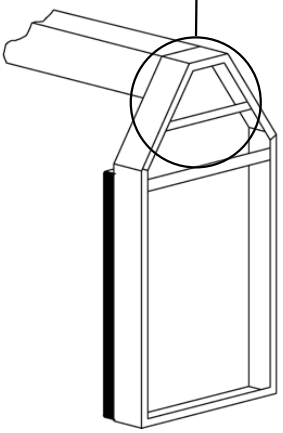
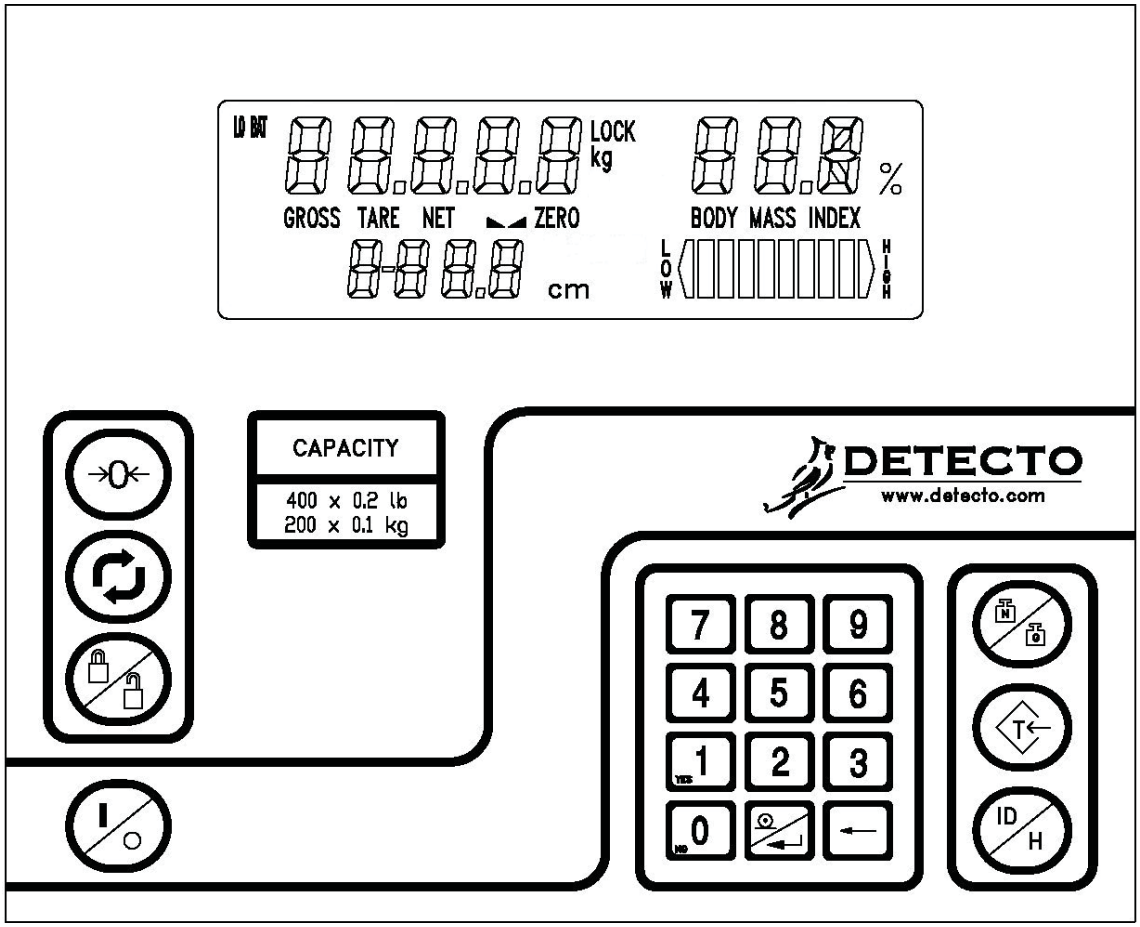


Figure No. 2



OPERATION



758C Keypad

Basic Operation

To Weigh

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show that the scale is ready for use.
3. Place patient on scale and read weight display.
4. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
5. Remove patient from scale.

Zero Weight Display

1. In Gross Weight mode (GROSS annunciator on), press **ZERO** key.
2. Weight display will return to zero. ZERO and STABLE ◣◢ annunciators will turn on to show a stable, center-of-zero gross weight condition.

Metric Conversion

Press **UNITS** key to toggle between pounds and kilograms. Note that the lb or kg annunciator will turn on to show the weighing unit selected.

OPERATION, CONT.

Basic Operation with ID – (No BMI)

To Weigh

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show scale is ready for use.
3. Press **ID/HEIGHT** key.
4. Display will change to show id=.
5. Using numeric keys, key-in up to an 11 digit identification number.
6. Press **PRINT/ENTER** key.
7. Place patient on scale
8. Read weight display.
9. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
10. Remove patient from scale.

Body Mass Index (BMI) Operation – (No ID)

To Weigh and Calculate BMI

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show scale is ready for use.
3. Perform tare operation if required. Refer to Push Button Tare or Tare Weight Entry in previous section for instructions on using tare.
4. Place patient on the scale and then press **ID/HEIGHT** key.
5. If Feet-Inches were selected in setup for height measurement, display will change to show FEEt=.
    a. Use numeric keys to enter 1 digit for height in feet, then press **PRINT/ENTER** key.
    b. Display will change to show inCH=.
    c. Use numeric keys to enter up to 3 digits (# # . #) for height in inches and then press **PRINT/ENTER** key or press **PRINT/ENTER** key if no inches are required.
6. If Centimeters was selected in setup for height measurement, display will change to show Cm=_.
    a. Use numeric keys to enter up to 4 digits (# # # . #) for height in centimeters and then press **PRINT/ENTER** key.
7. Read weight and BMI displays.
8. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
9. Remove patient from scale.

OPERATION, CONT.

Body Mass Index (BMI) Operation with ID

To Weigh and Calculate BMI

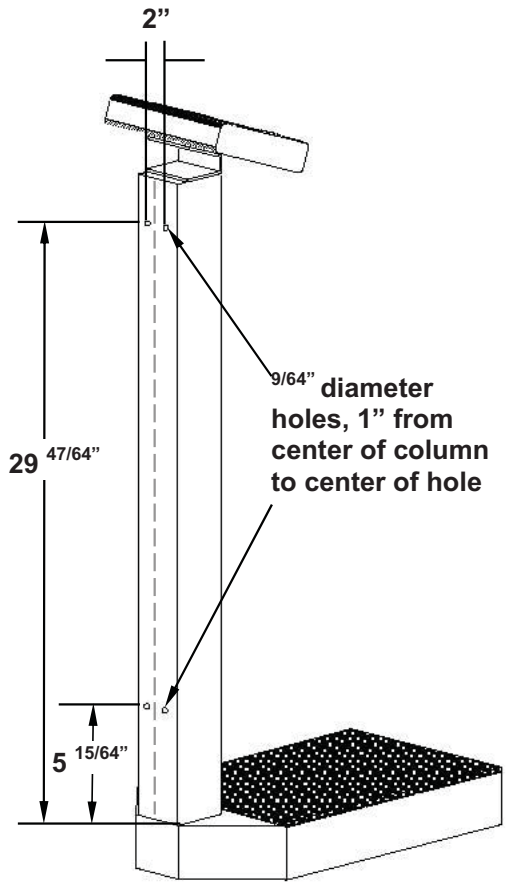
1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show scale is ready for use.
3. Press **ID/HEIGHT** key.
4. Display will change to show id=.
5. Using numeric keys, key-in up to an 11 digit identification number.
6. Press **PRINT/ENTER** key.
7. Place patient on scale.
8. Press **ID/HEIGHT** key.
9. If Feet-Inches were selected in setup for height measurement, display will change to show FEEt=.
    a. Using numeric keys, enter 1 digit for height in feet and then press **PRINT/ENTER** key.
    b. Display will change to show inCH=.
    c. Using numeric keys enter up to 3 digits (# # . #) for height in inches and then press **PRINT/ENTER** key or press **PRINT/ENTER** key if no inches are required.
10. If Centimeters was selected in setup for height measurement, display will change to show Cm=.
    a. Using numeric keys enter up to 4 digits (# # # . #) for height in centimeters and then press **PRINT/ENTER** key.
11. Read weight and BMI displays.
12. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
13. Remove patient from scale.
14. Press **NET/GROSS** key to return to Gross weight mode.
15. Press **ZERO** key. This will reset tare weight to zero.
16. BMI display and ID will clear when weight returns to zero.

HEIGHT ROD INSTRUCTIONS

Height Rod Hole Location

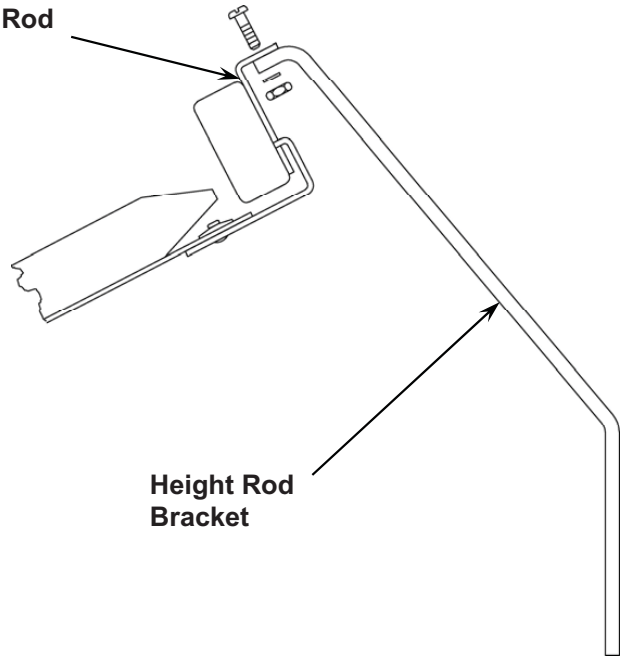
- Please check Height Rod hole locations before installing Height Rod.
- **Some models may require holes to be drilled.**
- Please follow the measurements for drilling holes if necessary.
- After holes have been drilled, please follow installation instructions.

IMPORTANT!
Measure from bottom of column, not floor or scale base.



Height Rod Installation

1. Remove the height rod, height rod brackets and hardware pack from the cardboard insert.
2. Attach the height rod brackets to the height rod using the four screws, lock washers and nuts enclosed in the hardware pack. Tighten all four screws.

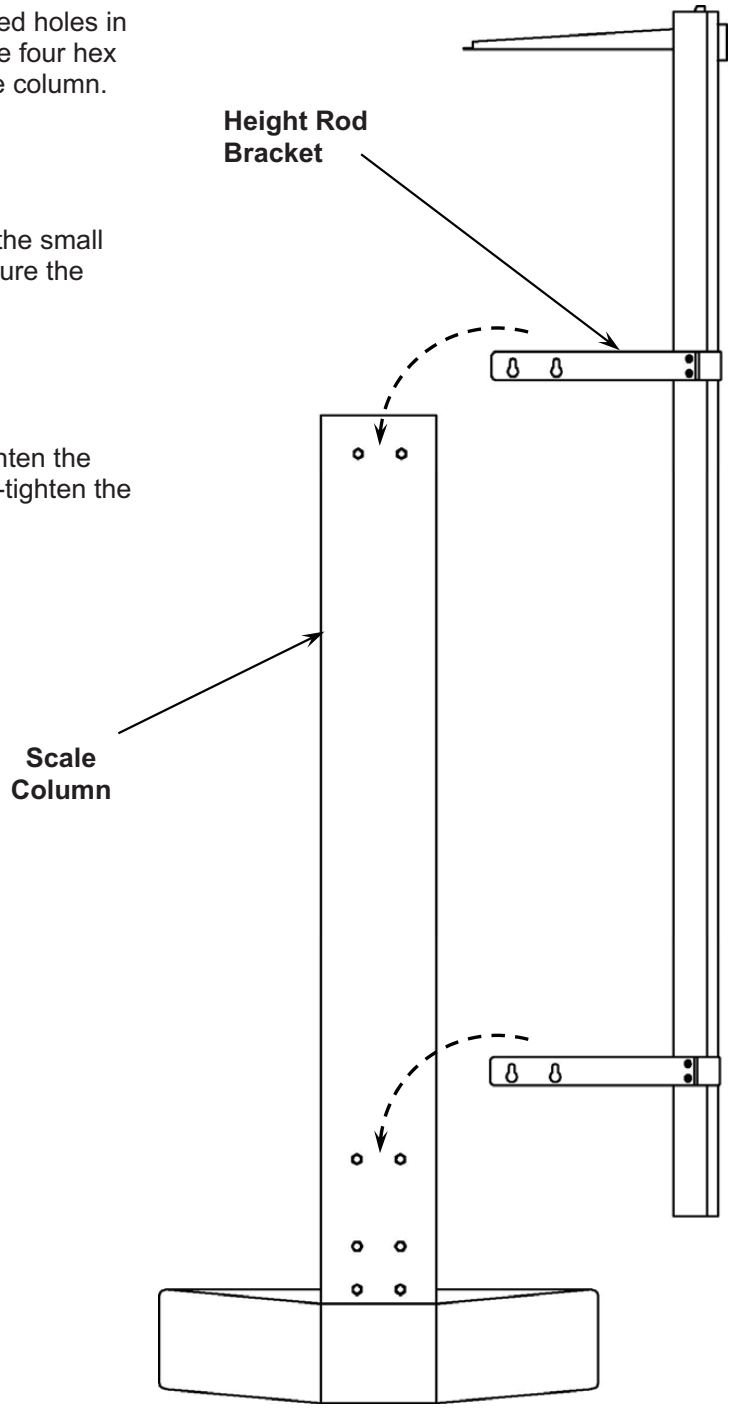


HEIGHT ROD INSTRUCTIONS, CONT.

3. Place the large end of the slotted holes in the height rod brackets over the four hex head screws on the back of the column.

4. Pull down to set the screws in the small end of the slotted hole and secure the bracket to the column.

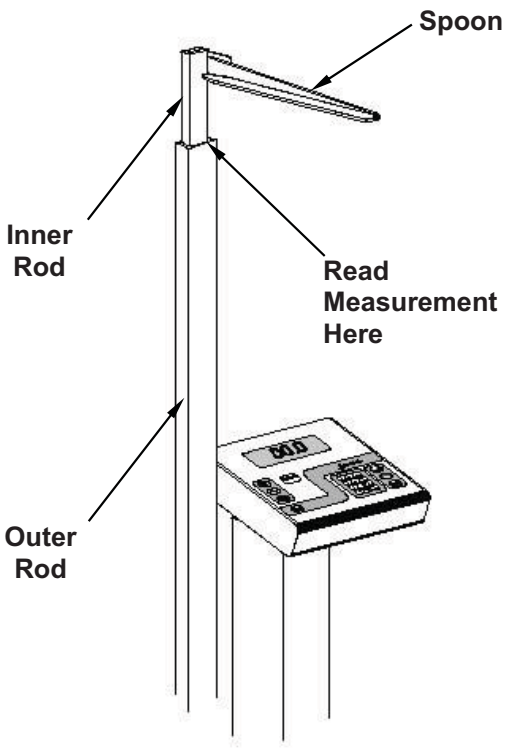
5. Use the included wrench to tighten the hex head screws. Do not over-tighten the screws.



HEIGHT ROD INSTRUCTIONS, CONT.

Height Rod Operating Guide

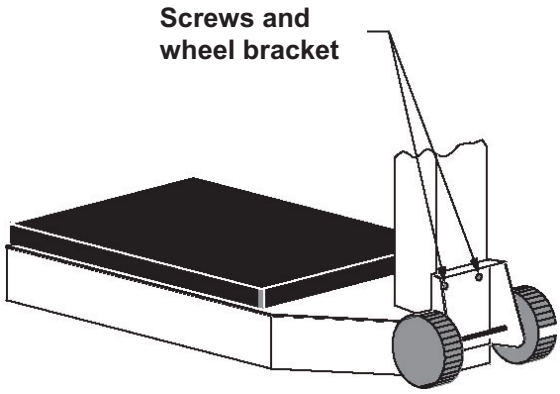
1. Before the person steps onto the scale platform, the spoon should be rotated to the horizontal position, and raised well above the person's apparent height.
2. The person may now step onto the scale platform. The spoon should be held horizontal and above the person's head.
3. Carefully lower the spoon, while keeping it horizontal, until it rests gently upon the top of the person's head. If the person is shorter than 3' 4" (101.5 cm), push the latch to the right, while simultaneously pushing down on the spoon, until the spoon rests horizontally upon the top of the person's head.
4. Read the height of the person as follows:
    - If the back of the spoon points to the outer height rod, then it points to the correct height.
    - If the back of the spoon points to the inner height rod, then the correct height is read at the top of the outer height rod (see "Read" arrow on the outer height rod).
5. While holding the spoon horizontally, raise the spoon above the person's head. The person may now step off of the scale platform. Hold the spoon horizontal until the person is clear of the height rod.
6. Rotate the spoon back to the vertical position and adjust the height rod back to the rest position (i.e. the spoon should be locked in place within the inner height rod and the inner rod should be at its lowest position).



OPTIONAL WHEELS INSTALLATION

How to Setup the Scale with Roller Wheels.

1. Remove the two lower screws in the back of the column.
2. Place the wheel bracket against the back of the column and align the holes in the bracket with the holes in the column.
3. Install the two screws removed in step 1, securing the wheel bracket to the column.



ERROR AND STATUS DISPLAYS

Display	Meaning
-Err-	General error, invalid keypad entry was attempted.
-OF-	Attempting to display a negative number greater than –9,999 or a positive number greater than 99,999
-trL-	Indicates an attempt to zero a weight outside scale zero range. Refer to the Setup and Calibration trL= (Four Percent Zero Tracking Range Limit) parameter.
-UnS-	Motion is present when indicator is attempting to perform one of the following operations: Power Up, Zero, or Zero Weight Display
CAL Ib	Indicates calibration is necessary.
AdErr	Consult your scale service representative.
ErrA	
ErrAL	
ErrAH	
EE Err	
OCAP	Scale weight exceeds scale capacity
OFF	Displayed to indicate the indicator is turning off.

CARE AND CLEANING OF SCALE

Powder Painted Steel

While powder painted steel is attractive and so durable that it will last many years longer than ordinary painted steel, it is desirable to clean it thoroughly on a routine basis. There are three basic things that should be remembered when cleaning powder painted steel.

1. Do not use wire brushes, abrasives, or cleaning tools such as steel pads and scrapers, which will scratch the painted surface. Instead, use soft cloths or plastic scouring pads.
2. When possible use treated water. Hard water can leave behind deposits. Soft water is much gentler on the painted steel's surface.
3. Avoid the use of acetone, thinner or other volatile solvents and abrasive type cleaners for cleaning. If required, a mild solvent such as mineral spirits can be used to remove oil, grease, tars, wax, and similar substances. Use a cloth dampened with mineral spirits and apply only to areas that are contaminated. Follow up the use of this mild solvent with detergent cleaning and rinsing.

Stainless Steel

While stainless steel is a sturdy and attractive material, it is not incorruptible. Stainless steel is susceptible to rusting. There are three basic things which can break down stainless steel's outer layer and allow corrosion.

1. Mechanical abrasion - those things which will scratch the steel's surface, such as steel pads, wire brushes and scrapers. Instead, use soft cloths or plastic scouring pads for cleaning and brush with the polish line or "grain.
2. Water - especially hard water which can leave behind deposits. When possible use treated water - soft water is much gentler on the stainless steel's surface.
3. Chlorides - often found in water, food and table salt. One of the worst perpetrators of chlorides can come from household and industrial cleaners, especially those with quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel. Instead, use non-chloride cleaners. If chlorinated cleaners must be used, rinse several times and wipe dry immediately.

PARTS IDENTIFICATION

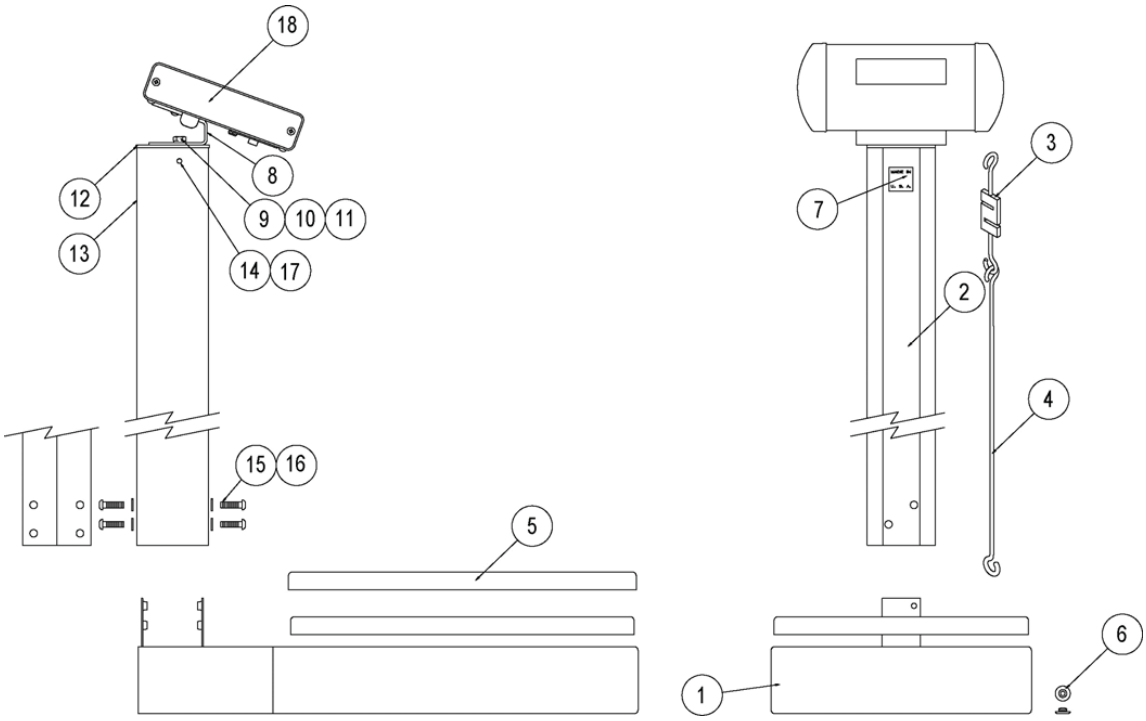
FINAL ASSEMBLY

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	3P1201X-1	BASE ASSEMBLY
	1	0033-X306-0A	BASE ASSY S.S. FOR 8430S, 8431S, 8437S
2	1	430XG3R800	COLUMN ASSEMBLY FOR 6127(KG), 6129(KG)
	1	0033-B315-0A	COLUMN ASSEMBLY FOR 8430S, 8431S, 8437S
3	1	709GR1206	LOAD CELL ASSY
4	1	0033-B254-08	DRAFT ROD FOR 8430 SERIES
5	1	3P8068	PLATFORM COVER
6	4	63K1038	BASE LEG
7	1	6650-0087	LABEL, MADE IN USA
8	1	0033-B164-08	MOUNTING BRKT
	1	0033-B314-08	INDICATOR MOUNT, S.S. FOR 8430S, 8431S, 8437S
9	1	391RV204	NUT ELASTIC STOP 1/4-20 Z/P
	1	6013-0439	NUT 1/4-20 ELASTIC STOP S.S.
10	1	6021-1454	SCW HEX HEAD 1/4 -20 X 3/4
	1	6007-0013	SCW BLT HEX HD 1/4-20x3/4" SS
11	1	6024-0003	WASHER FLAT 9/32 ID X 5/8 OD
	1	6024-0037	WASHER LOCK HELICAL SP #10 REG SS
12	1	0033-B104-0A	TOP PLATE ASSY.
13	1	593R986	SERIAL TAG
14	2	6024-0049	WASHER LOCK EXT #10
15	6	6024-0047	WASHER LOCK EXT TOOTH 1/4" TYPE A Z-PL
16	6	6021-1423	SCW TRUSS HEAD MACHINE-SCW 1/4-20 X 1/2
17	2	6021-1045	SCW HEX HEAD #10-32 X 1/2 Z/P
	2	6021-1002	SCW HEX-HEAD.. MACHINE-SCW 10-32X.500L
18	1	758C	DIG. WT. INDICATOR
	1	758CS	DIG. WT. INDICATOR S.S. FOR 8430S, 8431S, 8437S
19*	1	0033-D203-0A	HEIGHT ROD ASSEMBLY, INCH/CM FOR 8430
20*	1	0033-D475-0A	HEIGHT ROD ASSEMBLY, 1/4”/1mm FOR 6129KGM
21*		728R121	OPTIONAL AC ADAPTER 115VAC/12VDC @ 300MA
22*		728R901	OPTIONAL AC ADAPTER 230VAC/14VDC @ 300MA

* NOT SHOWN

PARTS IDENTIFICATION, CONT.

FINAL ASSEMBLY, CONT.



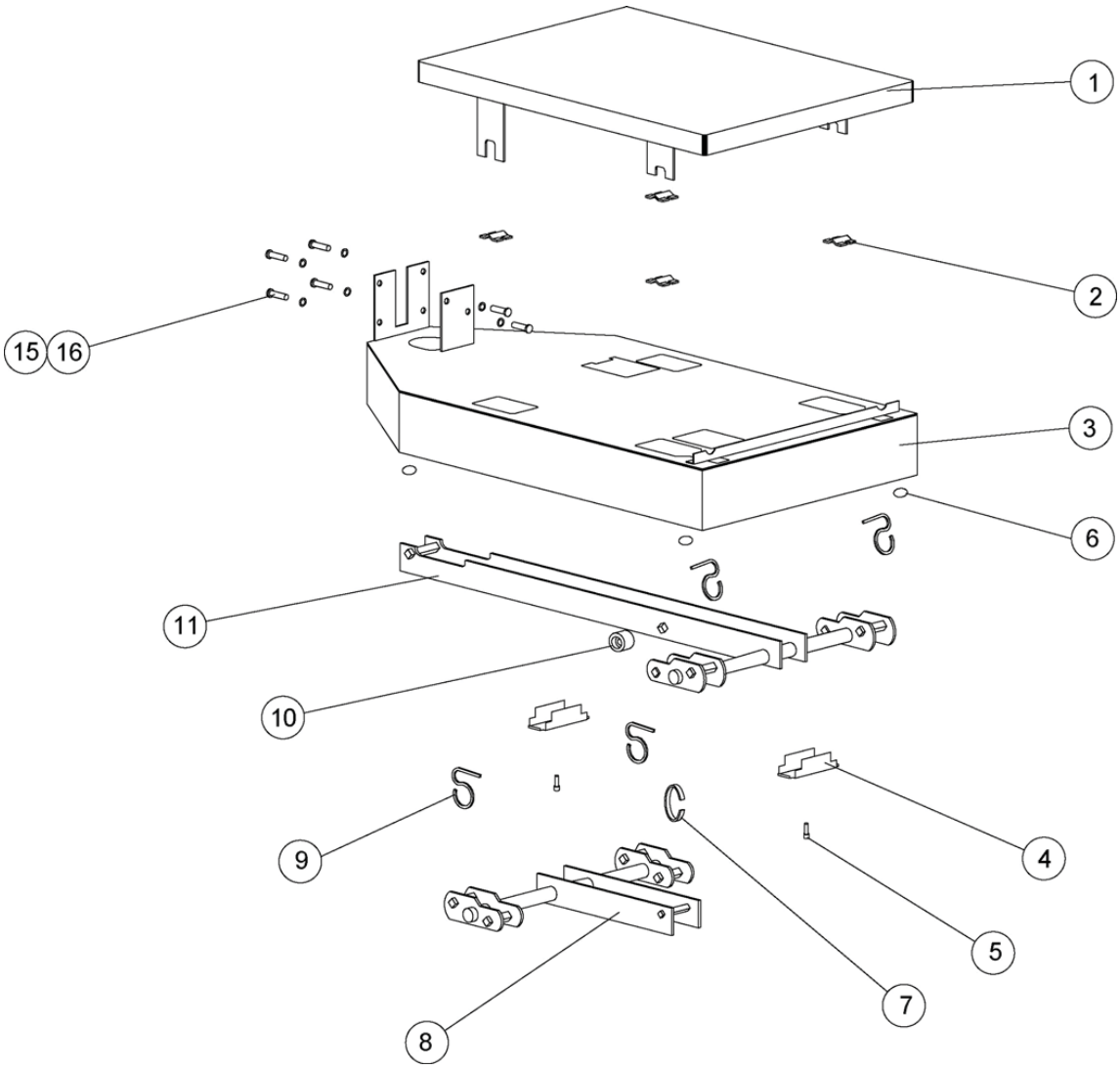
PARTS IDENTIFICATION

BASE ASSEMBLY

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	3P2011X	PLATFORM WELDMENT
2	4	3P2087	PLATFORM LOAD BEARING
3	1	3P1001X	BASE WELDMENT
		0033-D307-0A	BASE ASSY S.S. FOR 8430S, 8431S, 8437S
4	2	3P60	CHECK PLATE
5	2	6021-0985	HEX WASHER HD SCW #10 X 1/2
6	4	63K1038	BASE LEG
7	1	2U58	UNION CENTER HANGER
8	1	3P8003X	SHORT LEVER ASSEMBLY
9	4	3P8059	UNION HANGER
10	1	3P122	BUMPER
11	1	3P8002X	LONG LEVER ASSEMBLY
15	6	6024-0047	WASHER LOCK EXT 1/4
16	6	6021-1423	SCW TRUSS HEAD 1/4-20 X 1/2

PARTS IDENTIFICATION, CONT.

BASE ASSEMBLY, CONT.



STATEMENT OF LIMITED WARRANTY

Detecto Scale warrants its equipment to be free from defects in material and workmanship as follows: Detecto warrants to the original purchaser only that it will repair or replace any part of equipment which is defective in material or workmanship for a period of one **(1) year** from date of shipment. Detecto shall be the sole judge of what constitutes a defect.

During the **first ninety (90) days** Detecto may choose to supply all necessary replacement parts and service during normal weekday working hours at no charge to the buyer.

After the first ninety (90) days Detecto will supply parts and service at the job site provided the owner agrees to pay the Dealer for all travel time, including mileage and test equipment, as well as any expenses incurred over the direct labor of the technician at the job site. This limited warranty honors only labor performed by Detecto authorized dealers.

This warranty does not apply to peripheral equipment not manufactured by Detecto; this equipment will be covered by certain manufacturer's warranty only.

This warranty does not include replacement of expendable or consumable parts. This does not apply to any item which has deteriorated or damaged due to wear, accident, misuse, abuse, improper line voltage, overloading, theft, lightning, fire, water or acts of God, or due to extended storage or exposure while in purchaser's possession. This warranty does not apply to maintenance service. Purchased parts will have a ninety (90) day repair or replacement warranty only.

Detecto may require components be returned to the factory; they must be properly packed and shipping charges prepaid. A return authorization number must be obtained for all returns and marked on the outside of all returned packages. Detecto accepts no responsibility for loss or damage in transit.

STATEMENT OF LIMITED WARRANTY

Conditions Which Void Limited Warranty

This warranty shall not apply to equipment which:
A.) Has been tampered with, defaced, mishandled or have had repairs and modifications not authorized by Detecto.
B.) Has had serial number altered, defaced, or removed.
C.) Has not been grounded according to Detecto's recommended procedure.

Freight Carrier Damage

Claims for equipment damaged in transit must be referred to the freight carrier in accordance with freight carrier regulations.

This warranty sets forth the extent of our liability for breach of any warranty or deficiency in connection with the sale or use of the product. Detecto will not be liable for consequential damages of any nature, including but not limited to, loss of profit, delays or expenses, whether based on tort or contract. Detecto reserves the right to incorporate improvements in material and design without notice and is not obligated to incorporate improvements in equipment previously manufactured.

The foregoing is in lieu of all other warranties, express or implied including any warranty that extends beyond the description of the product including any warranty of merchantability or fitness for a particular purpose. This warranty covers only those Detecto products installed in the forty-eight (48) contiguous continental United States.

DETECTO
A Division of Cardinal Scale Manufacturing Co.

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02/06
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DESIGNED & MANUFACTURED
IN U.S.A.